

FBS Cartridge Filter

Provides safe, sterile filtration for liquid in food and beverage applications.

FBS cartridge filters join the Entegris portfolio of filtration solutions intended to help ensure reliable product processing. Constructed of polypropylene components and a hydrophilic polyethersulfone (PES) membrane, FBS cartridge filters are economical and efficient for use in various food and beverage applications.

Our portfolio of FBS cartridge filters are 100% tested during manufacturing to ensure high-quality sterility assurance. Various fitting sizes and types are available providing design flexibility and versatility in a broad range of applications.

APPLICATIONS

- Facility water
- Bottled water
- Soft drinks

FEATURES & BENEFITS

All components meet USP<88> ,21CFR and Commission regulation for food contact materials	Provides biosafety insurance and global regulatory compliance
Sterilizing-grade meets Bacterial Challenge Test ASTM F838	Safety sterile filtration for applications in food and beverage
Excellent robustness and integrity maintained after multiple cycles of SIP & hot water sanitization	Ensures high quality for sterility assurance and longer service life even at extremely demanding applications

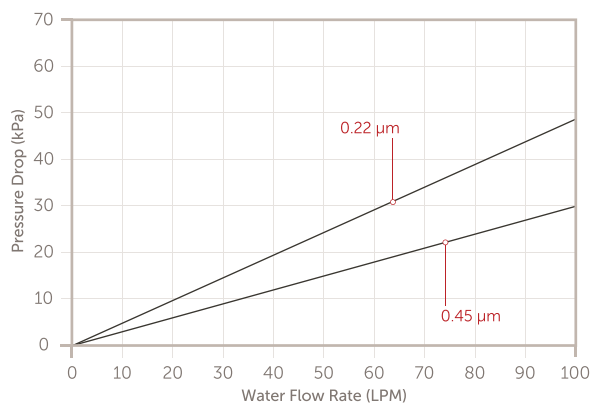


Economical and efficient for use in various food and beverage applications

SPECIFICATIONS

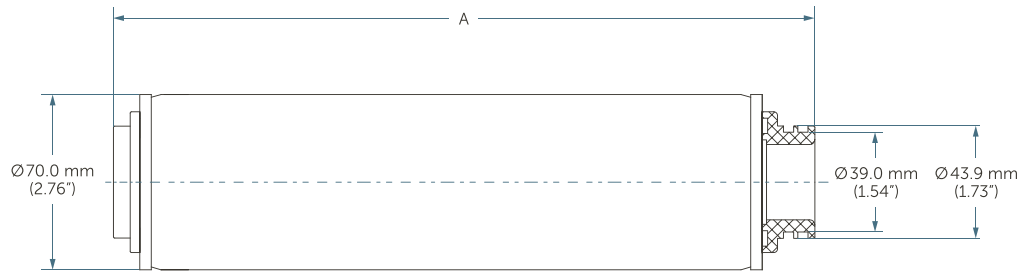
Retention rating	0.22 μm , 0.45 μm	
Materials	Membrane	Polyethersulfone (PES)
	Support	Polypropylene
	O-ring	Silicone (other material on request)
Filtration area	$\geq 0.6 \text{ m}^2$ @ 10", $\geq 0.3 \text{ m}^2$ @ 5"	
Integrity test (0.22 μm)	Minimum bubble point at 25°C (77°F)	$\geq 3500 \text{ mbar}$
	Maximum diffusion flow at 2800 mbar at 25°C (77°F)	$\leq 30 \text{ mL/min}$ @ 10"
Maximum operating conditions	Maximum forward differential pressure	5 bar @ 25°C (77°F), 2.0 bar @ 80°C (176°F)
Sterilization cycles	Maintained integrity after 30 cycles of steam-in-place (SIP) sterilization, 30 min at 135°C (275°F)	
Sanitization cycles	Maintained integrity after 50 cycles of hot water sanitization, 30 min at 85°C (185°F)	
Material toxicity	All components meet the requirements of the USP <88> Reactivity Test for Class VI Plastics	
	Filters meet the requirements of USP <87> Biological Reactivity Tests In Vitro Cytotoxicity	
Animal Free	Meets the EU directive for animal free CPMP EMA/410/01 and 21 CFR parts 189.5	
Bacterial challenge test	Passed the bacterial challenge test using <i>Brevundimonas diminuta</i> (ATCC 19146) at a minimum challenge concentration $1 \times 10^7 \text{ CFU/cm}^2$ (0.22 μm) per ASTM F838	
Indirect food additive	Meets the FDA Indirect Food Additive requirements cited in 21 CFR 177	
Food contact material	Meets the Regulation (EU) No. 1935 /2004	
Quality	Manufactured in accordance with ISO 9001 and ISO 13485 certified quality management system	

PERFORMANCE DATA



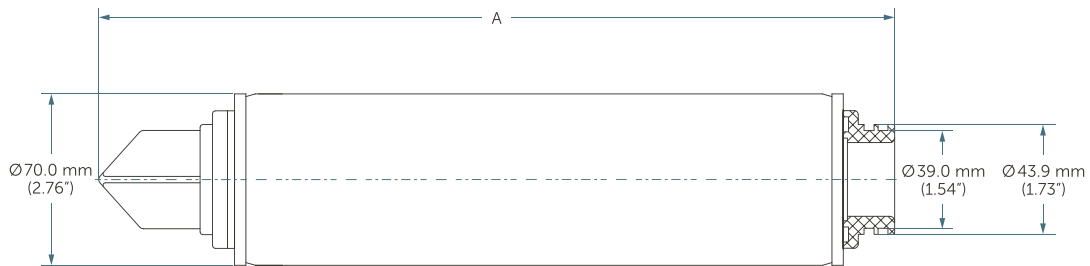
DRAWINGS

Code 0



Length	Code 0 Dimension A
5"	148.0 mm (5.8")
10"	273.0 mm (10.7")
20"	517.5 mm (20.4")
30"	762.0 mm (30.0")
40"	1006.5 mm (39.6")

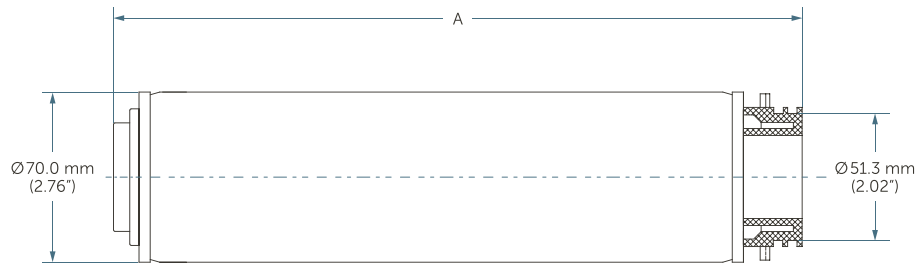
Code 5



Length	Code 5 Dimension A
5"	—
10"	314.0 mm (12.4")
20"	558.5 mm (22.0")
30"	803.0 mm (31.6")
40"	1047.5 mm (41.2")

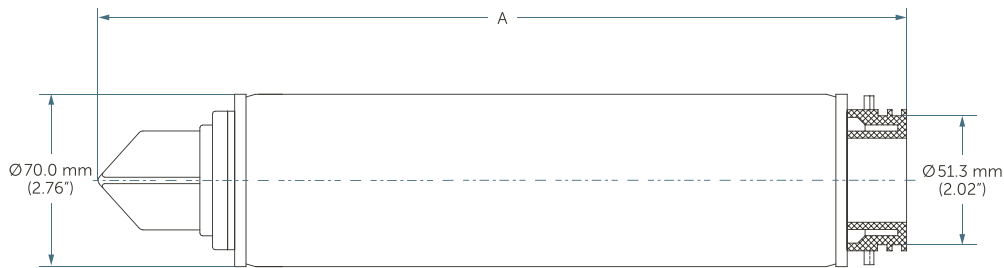
DRAWINGS

Code 6



Length	Code 6 Dimension A
5"	150.5 mm (5.9")
10"	276.0 mm (10.9")
20"	520.0 mm (20.5")
30"	764.5 mm (30.1")
40"	1009.0 mm (39.7")

Code 7



Length	Code 7 Dimension A
5"	—
10"	316.5 mm (12.5")
20"	561.0 mm (22.1")
30"	805.5 mm (31.7")
40"	1050.0 mm (41.3")

ORDERING INFORMATION

PART NUMBER	RETENTION RATING	CONNECTION	LENGTH	O-RING	PACK
FBS022005S1	0.22 µm	Code 0	5"	Silicone	1
FBS022010S1	0.22 µm	Code 0	10"	Silicone	1

ORDERING INFORMATION

PART NUMBER	RETENTION RATING	CONNECTION	LENGTH	O-RING	PACK
FBS022020S1	0.22 µm	Code 0	20"	Silicone	1
FBS022030S1	0.22 µm	Code 0	30"	Silicone	1
FBS022040S1	0.22 µm	Code 0	40"	Silicone	1
FBS022505S1	0.22 µm	Code 5	5"	Silicone	1
FBS022510S1	0.22 µm	Code 5	10"	Silicone	1
FBS022520S1	0.22 µm	Code 5	20"	Silicone	1
FBS022530S1	0.22 µm	Code 5	30"	Silicone	1
FBS022540S1	0.22 µm	Code 5	40"	Silicone	1
FBS022605S1	0.22 µm	Code 6	5"	Silicone	1
FBS022610S1	0.22 µm	Code 6	10"	Silicone	1
FBS022620S1	0.22 µm	Code 6	20"	Silicone	1
FBS022630S1	0.22 µm	Code 6	30"	Silicone	1
FBS022640S1	0.22 µm	Code 6	40"	Silicone	1
FBS022710S1	0.22 µm	Code 7	10"	Silicone	1
FBS022720S1	0.22 µm	Code 7	20"	Silicone	1
FBS022730S1	0.22 µm	Code 7	30"	Silicone	1
FBS045005S1	0.45 µm	Code 0	5"	Silicone	1
FBS045010S1	0.45 µm	Code 0	10"	Silicone	1
FBS045020S1	0.45 µm	Code 0	20"	Silicone	1
FBS045030S1	0.45 µm	Code 0	30"	Silicone	1
FBS045040S1	0.45 µm	Code 0	40"	Silicone	1
FBS045505S1	0.45 µm	Code 5	5"	Silicone	1
FBS045510S1	0.45 µm	Code 5	10"	Silicone	1
FBS045520S1	0.45 µm	Code 5	20"	Silicone	1
FBS045530S1	0.45 µm	Code 5	30"	Silicone	1
FBS045540S1	0.45 µm	Code 5	40"	Silicone	1

ORDERING INFORMATION

PART NUMBER	RETENTION RATING	CONNECTION	LENGTH	O-RING	PACK
FBS045605S1	0.45 µm	Code 6	5"	Silicone	1
FBS045610S1	0.45 µm	Code 6	10"	Silicone	1
FBS045620S1	0.45 µm	Code 6	20"	Silicone	1
FBS045630S1	0.45 µm	Code 6	30"	Silicone	1
FBS045640S1	0.45 µm	Code 6	40"	Silicone	1
FBS045710S1	0.45 µm	Code 7	10"	Silicone	1
FBS045720S1	0.45 µm	Code 7	20"	Silicone	1
FBS045730S1	0.45 µm	Code 7	30"	Silicone	1

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](https://www.entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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